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EXAMINER
SAVLA, ARPAN P

ART UNIT	PAPER NUMBER
2185	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/591,933	SURESH ET AL.
Office Action Summary	**Examiner**	**Art Unit**	
	Arpan P. Savla	2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 September 2006</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 September 2006</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The instant application having Application No. 10/591,933 has a total of 21

claims pending, there are 3 independent claims and 18 dependent claims, all of which

are ready for examination by the Examiner.

INFORMATION CONCERNING THE OATH/DECLARATION

Oath/Declaration

1.   The oath or declaration is defective. A new oath or declaration in compliance

with 37 CFR 1.67(a) identifying this application by application number and filing date is

required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It does not identify the foreign application for patent or inventor's certificate on
> which priority is claimed pursuant to 37 CFR 1.55, and any foreign application
> having a filing date before that of the application on which priority is claimed, by
> specifying the application number, country, day, month and year of its filing.

INFORMATION CONCERNING DRAWINGS

Drawings

2.   The drawings are objected to because in Fig. 5, element 510, the word "memroy"

should instead read "memory". Corrected drawing sheets in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several

views of the drawings for consistency. Additional replacement sheets may be necessary

to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

ACKNOWLEDGMENT OF REFERENCES CITED BY APPLICANT

Information Disclosure Statement

3.   As required by MPEP § 609(c), Applicant's submission of the Information

Disclosure Statements dated November 24, 2006 and March 12, 2008 are

acknowledged by the Examiner and some of the cited references have been considered

in the examination of the claims now pending. As required by MPEP § 609 c(2), a copy

of the PTOL-1449 initialed and dated by the Examiner is attached to the instant Office

action.

4.   Reference WO 2006/133597 A1 from the Information Disclosure Statement (IDS)

dated March 12, 2008 has not been considered because page 2 of the publication is

blank. The IDS has been placed in the application file, but the information referred to

therein has not been considered as to the merits. Applicant is advised that the date of

any re-submission of any item of information contained in this information disclosure

statement or the submission of any missing element(s) will be the date of submission for

purposes of determining compliance with the requirements based on the time of filing

the statement, including all certification requirements for statements under 37 CFR

1.97(e). See MPEP § 609.05(a).

OBJECTIONS

Claims

5.   **Claims 2-7** are objected to because "**A** method of claim 1" should instead read

"**The** method of claim 1"

6.   **Claims 9-14** are objected to because "**A** system of claim 8" should instead read

"**The** system of claim 8"

REJECTIONS NOT BASED ON PRIOR ART

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

8.   **Claims 15-21 are rejected under 35 U.S.C. 101 because the claimed**

invention is directed to non-statutory subject matter. Claims 15-21 are not limited

to tangible embodiments. In view of Applicant's disclosure, paragraph 0014, the

machine-readable medium is not limited to tangible embodiments, instead being define

as including both tangible embodiments (e.g. ROM, RAM, magnetic disk storage media,

optical disk storage media, flash memory devices) and intangible embodiments (e.g.

any mechanism for transmitting information in a form readable by a machine (i.e.

transmission media)). As such, claims 15-21 are not limited to statutory subject matter

and are therefore non-statutory.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

10.   **Claims 3, 4, 6, 7, 10, 11, 13, 14, 17, 18, 20, and 21 are rejected under 35**

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

out and distinctly claim the subject matter which applicant regards as the

invention.

11.   **As per claims 3, 4, 7, 10, 11, 17, and 18**, the claims recite the limitation "the

sequence table" (note, that limitation in question is separate and distinct from the

limitation "the sequence table entries"). There is insufficient antecedent basis for this

limitation in the claims because independent claims 1, 8, and 15 only recite "sequence

table entries" and not the actual "sequence table" itself.

12.   **As per claims 6, 13, and 20**, the claims recite the limitation "the data fragment".

There is insufficient antecedent basis for this limitation in the claims because

independent claims 1, 8, and 15 only recite "data frag ment**s**" (i.e. more than one data

fragment).

13.   **Also per claims 6, 13, and 20**, the claims substantially recite the limitation

"allocating a data fragment header associated to the data fragment **in** the non-volatile

memory" which implies that the data fragment is already written in the non-volatile

memory. However, the claims go on to recite this "allocating" step is done "**prior** to

writing the data fragment to the non-volatile memory". Thus, this contradiction renders

the claims vague and indefinite. For the purposes of applying prior art to the instant

application, the Examiner will interpret these claims to instead read "allocating a data

fragment header associated to the data fragment **to be written to** the non-volatile

memory prior to writing the data fragment to the non-volatile memory". Fig. 5, elements

502 and 503 of Applicant's drawings support such an interpretation.

14.   **As per claims 7, 14, and 21**, the claims substantially recite the limitation

"allocating a sequence table header associated with the sequence table **in** the non-

volatile memory" which implies that the sequence table is already written in the non-

volatile memory. However, the claims go on to recite this "allocating" step is done

"**prior** to writing the sequence table to the non-volatile memory". Thus, this

contradiction renders the claims vague and indefinite. For the purposes of applying prior

art to the instant application, the Examiner will interpret these claims to instead read

"allocating a sequence table header associated with the sequence table **to be written**

to the non-volatile memory prior to writing the sequence table to the non-volatile

memory". Fig. 5, elements 509 and 510 of Applicant's drawings support such an

interpretation.

REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

16.   **Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

See et al. (U.S. Patent 6,226,728) (hereinafter "See") in view of DeMarco et al. (U.S.

Patent 5,566,314) (hereinafter "DeMarco").

17.   **As per claims 1 and 15**, See discloses a method comprising:

writing data fragments to a non-volatile memory (col. 2, lines 11-21; col. 14, line 33; Fig.

18, element 1820); *It should be noted that the machine-readable medium of claims 15-*

21 executes the same functions as the method of claims 1-7. Therefore, any

reference(s) that teach claims 1-7 also teach the corresponding claims 15-21.

updating sequence table entries to the non-volatile memory that identify locations

of the data fragments written to the non-volatile memory (col. 14, lines 34-37; Fig. 18,

element 1824; col. 5, lines 38-54; Figs. 5 and 6).

See does not disclose that sequence table entries are stored in volatile memory.

DeMarco discloses a file pointer table stored in RAM (i.e. a volatile memory) (col.

2, line 66 – col. 3, line 1; Fig. 4).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use DeMarco's RAM to store See's sequence table. The motivation for doing so would have been to ability to access the sequence table faster.

18.   **As per claims 2 and 16**, the combination of See/DeMarco discloses writing the sequence table entries to the non-volatile memory (See, col. 14, lines 34-37; Fig. 18, element 1824).

19.   **As per claims 3 and 17**, the combination of See/DeMarco discloses writing the sequence table having the sequence table entries to the non-volatile memory if the sequence table is full (See, col. 14, lines 34-37 and 42-46; Fig. 18, elements 1824, 1840, 1842, and 1844). *It should be noted that this limitation contains language that suggests or makes optional but does not require steps to be performed or does not limit the claim to a particular structure and therefore does not limit the scope of a claim. The term 'if' denotes an optionally recited limitation and optionally recited limitations are not guaranteed to take place. See MPEP §2106, Section II(C)).*

20.   **As per claims 4 and 18**, the combination of See/DeMarco discloses writing the sequence table having the sequence table entries to the non-volatile memory if writing the data fragments to the non-volatile memory is completed (See, col. 14, lines 34-37 and 48-52; Fig. 18, elements 1824 and 1830; Fig. 19, elements 1910 and 1920). *It should be noted that this limitation contains language that suggests or makes optional but does not require steps to be performed or does not limit the claim to a particular structure and therefore does not limit the scope of a claim. The term 'if' denotes an*

optionally recited limitation and optionally recited limitations are not guaranteed to take

place. See MPEP §2106, Section II(C)).

21.   **As per claims 5 and 19**, the combination of See/DeMarco discloses updating a

transaction indicator in the non-volatile memory prior to writing a transaction to the non-

volatile memory (col. 14, lines 14-15 and 31-32; Fig. 17, element 1734; Fig. 18, element

1816);

        and updating the transaction indicator in the non-volatile memory after writing the

transaction to the non-volatile memory (col. 14, lines 54-56; Fig. 19, element 1940),

        wherein the transaction comprises the data fragments and the sequence table

entries (col. 14, lines 33-37; Fig. 18, elements 1820 and 1824).

22.   **As per claims 6 and 20**, the combination of See/DeMarco discloses allocating a

data fragment header associated to the data fragment to be written to the non-volatile

memory prior to writing the data fragment to the non-volatile memory (col. 14, lines 27-

28; Fig. 18, element 1814); *See the 112, second paragraph rejection of these claims*

above.

        and validating the data fragment header after writing the sequence table entries

to the non-volatile memory (col. 14, lines 54-56; Fig. 19, element 1940).

23.   **As per claims 7 and 21**, the combination of See/DeMarco discloses allocating a

sequence table header associated with the sequence table to be written to the non-

volatile memory prior to writing the sequence table to the non-volatile memory (col. 14,

lines 13-15; Fig. 17, element 1732); *See the 112, second paragraph rejection of these*

claims above.

and validating the sequence table header after writing the sequence table entries

to the non-volatile memory (col. 14, lines 54-56; Fig. 19, element 1940).

24.   **As per claim 8**, See discloses a system, comprising:

a non-volatile memory (col. 3, lines 21-22; Fig. 1, element 110);

a volatile memory (Fig. 1, element 130);

and a processor (Fig. 1, element 140) to:

write data fragments to a non-volatile memory (col. 2, lines 11-21; col. 14, line

33; Fig. 18, element 1820);

and update sequence table entries to the non-volatile memory that identify

locations of the data fragments written to the non-volatile memory (col. 14, lines 34-37;

Fig. 18, element 1824; col. 5, lines 38-54; Figs. 5 and 6).

See does not disclose that sequence table entries are stored in volatile memory.

DeMarco discloses a file pointer table stored in RAM (i.e. a volatile memory) (col.

2, line 66 – col. 3, line 1; Fig. 4).

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to use DeMarco's RAM to store See's sequence table. The motivation for

doing so would have been to ability to access the sequence table faster.

25.   **As per claim 9**, the combination of See/DeMarco discloses the processor further

writes the sequence table entries to the non-volatile memory (See, col. 14, lines 34-37;

Fig. 18, element 1824).

26.   **As per claim 10**, the combination of See/DeMarco discloses the processor

further writes the sequence table having the sequence table entries to the non-volatile

memory if the sequence table is full (See, col. 14, lines 34-37 and 42-46; Fig. 18,

elements 1824, 1840, 1842, and 1844). *See the citation note for claims 3 and 17*

above.

27.   **As per claim 11**, the combination of See/DeMarco discloses the processor

further writes the sequence table having the sequence table entries to the non-volatile

memory if writing the data fragments to the non-volatile memory is completed (See, col.

14, lines 34-37 and 48-52; Fig. 18, elements 1824 and 1830; Fig. 19, elements 1910

and 1920). *See the citation note for claims 4 and 18 above.*

28.   **As per claim 12**, the combination of See/DeMarco discloses the processor

further:

        updates a transaction indicator in the non-volatile memory prior to writing a

transaction to the non-volatile memory (col. 14, lines 14-15 and 31-32; Fig. 17, element

1734; Fig. 18, element 1816);

        and updates the transaction indicator in the non-volatile memory after writing the

transaction to the non-volatile memory (col. 14, lines 54-56; Fig. 19, element 1940),

        wherein the transaction comprises the data fragments and the sequence table

entries (col. 14, lines 33-37; Fig. 18, elements 1820 and 1824).

29.   **As per claim 13**, the combination of See/DeMarco discloses the processor

further:

        allocates a data fragment header associated to the data fragment to be written to

the non-volatile memory prior to writing the data fragment to the non-volatile memory

(col. 14, lines 27-28; Fig. 18, element 1814); *See the 112, second paragraph rejection of this claim above.*

and validates the data fragment header after writing the sequence table entries to the non-volatile memory (col. 14, lines 54-56; Fig. 19, element 1940).

30.   **As per claim 14**, the combination of See/DeMarco discloses the processor further:

allocates a sequence table header associated with a sequence table to be written to the non-volatile memory prior to writing the sequence table to the non-volatile memory (col. 14, lines 13-15; Fig. 17, element 1732); *See the 112, second paragraph rejection of these claims above.*

and validates the sequence table header after writing the sequence table entries to the non-volatile memory (col. 14, lines 54-56; Fig. 19, element 1940).

Conclusion

STATUS OF CLAIMS IN THE APPLICATION

The following is a summary of the treatment and status of all claims in the application as recommended by MPEP 707.70(i):

CLAIMS REJECTED IN THE APPLICATION

Per the instant office action, **claims 1-21** have received a first action on the merits and are subject of a non-final action.

RELEVANT ART CITED BY THE EXAMINER

The following prior art made of record and not relied upon is cited to establish the level of skill in Applicant's art and those arts considered reasonably pertinent to Applicant's disclosure. See MPEP 707.05(e).

1.   U.S. Patent 6,401,160 (See et al.) discloses a method and apparatus to permit adjustable code/data boundary in a nonvolatile memory.

2.   U.S. Patent Application Publication 2004/0073582 (Spiegel) discloses updating a file in a fragmented file system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arpan P. Savla whose telephone number is (571) 272-1077. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on (571) 272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arpan Savla/   /Sanjiv Shah/
Examiner, Art Unit 2185   Supervisory Patent Examiner, Art
March 13, 2009   Unit 2185